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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,336	01/20/2004	Dennis J. Klein	3780.002	9814

24040 7590 02/14/2006

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EXAMINER
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WILKINS III, HARRY D

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/760,336

**Applicant(s)**

KLEIN ET AL.

**Examiner**

Harry D. Wilkins, III

**Art Unit**

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. The indicated allowability of claims 21-28 is withdrawn in view of the newly discovered reference(s) to Chiang (US 5,244,558) and Appleby (US 5,813,222).

Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang (US 5,244,558) in view of Appleby (US 5,813,222).

Chiang teaches (see abstract, figures 1-4 and related description at col. 2, line 8 to col. 3, line 18) a system for producing a combustible gas by use of an electrolyzer for use in combustion equipment such as a welder, the system including an electrolyte reservoir 25 having a top portion adapted to contain the generated combustible gas and a bottom portion containing electrolytic fluid comprising water, an electrolyzer 2 being installed in a closed pressurized portion of the system, an electrical conductor contained within the electrolyzer (anode and cathode rods), an interstitial space within the electrolyte reservoir above the electrolytic fluid in the top portion of the reservoir wherein the generated combustible gas accumulates and a filter 3 through which the generated combustible gas passes before being drawn as needed for use.

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Thus, Chiang fails to teach (1) a pump fluidly interposed between the electrolyte reservoir and the electrolyzer and (2) a radiator fluidly interposed between the electrolyzer and electrolyte reservoir.

Appleby et al teach (see figures 1 and 3, col. 6, lines 15-19 and col. 8, lines 10-30) a system whereby water is electrolyzed to form a combustible gas. Appleby teaches an electrolyzer and an electrolyte reservoir. Appleby teaches that flow from the reservoir to the electrolyzer can be established either by gravity flow or by using a pump. Appleby teaches that the product gas is passed through a condenser (i.e.- radiator) prior to being used so that any vaporized water present in the gas will be collected and not sent forward in the system. Water in the combustible gas would have been detrimental to combustion results.

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated a pump and a radiator as taught by Appleby et al into the system of Chiang because the pump would have allowed positive flow and control of the flow of the electrolyte from the reservoir into the electrolyzer and the radiator would have had the benefit of condensing any vaporized water molecules from the combustible gas, such that when the gas was returned to the reservoir, the water would be condensed to return to the electrolyzer and thus be separated from the combustible gas.

With respect to the composition of the combustible gas produced by the system, including the limitations of claims 22-28, this limitation is related to the manner of operating the claimed system. The structure of the prior art is identical to the claimed

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structure. Thus, one of ordinary skill in the art would have expected the prior art structure to have been capable of forming the claimed composition. See MPEP 2113.

With respect to the claim limitation “dryer/filter means through which the generated combustible gas passes before being drawn as needed for use”, the limitation is deemed to invoke 35 USC 112, 6<sup>th</sup> paragraph, and as such, has been treated to include the structure disclosed by Applicant (332) for that purpose and any other functional equivalents. Thus, the safety device 3 of Chiang would be considered function to filter and dry the combustible gas since it appears to be identical in structure to element 332.

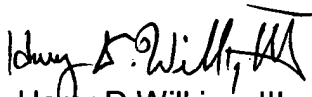
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Harry D Wilkins, III  
Examiner  
Art Unit 1742

hdw